

Year 3 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2020-June 30, 2021

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2020 and June 30, 2021 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Stormwater Management Program (SWMP) Information

SWMP Location (web address):

Date SWMP was Last Updated:

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

Impairment(s)			
<input type="checkbox"/>	Bacteria/Pathogens	<input type="checkbox"/>	Chloride
<input type="checkbox"/>	Solids/ Oil/ Grease (Hydrocarbons)/ Metals	<input type="checkbox"/>	Nitrogen
<input type="checkbox"/>		<input type="checkbox"/>	Phosphorus
TMDL(s)			
<i>In State:</i>	<input type="checkbox"/>	Assabet River Phosphorus	<input type="checkbox"/>
	<input type="checkbox"/>	Bacteria and Pathogen	<input type="checkbox"/>
	<input type="checkbox"/>	Charles River Watershed Phosphorus	<input type="checkbox"/>
	<input type="checkbox"/>	Lake and Pond Phosphorus	<input type="checkbox"/>
<i>Out of State:</i>	<input type="checkbox"/>	Bacteria/Pathogens	<input type="checkbox"/>
	<input type="checkbox"/>	Metals	<input type="checkbox"/>
	<input type="checkbox"/>	Nitrogen	<input type="checkbox"/>
	<input type="checkbox"/>	Phosphorus	<input type="checkbox"/>
<input type="button" value="Clear Impairments and TMDLs"/>			

Next, check off all requirements below that have been completed. **By checking each box you are certifying that you have completed that permit requirement fully.** If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.

Year 3 Requirements

- Inspected and screened all outfalls/interconnections (excluding Problem and Excluded outfalls)
- Updated outfall/interconnection priority ranking based on the information collected during the dry weather inspections as necessary
- Post-construction bylaw, ordinance, or other regulatory mechanism was updated and adopted consistent with permit requirements

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 3 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Out of the 238 outfalls in the Town, only five were not screened because of accessibility issues. We will notify residents in advance and sample these locations in Year 4 of the permit.

Annual Requirements

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- Kept records relating to the permit available for 5 years and made available to the public
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - This is not applicable because we do not have sanitary sewer
 - This is not applicable because we did not find any new SSOs

- The updated SSO inventory is attached to the email submission
- The updated SSO inventory can be found at the following website:

- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- Provided training to employees involved in IDDE program within the reporting period
- All curbed roadways were swept at least once within the reporting period
- Updated system map due in year 2 as necessary
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Updated inventory of all permittee owned facilities as necessary
- O&M programs for all permittee owned facilities have been completed and updated as necessary
- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Inspected all permittee owned treatment structures (excluding catch basins)

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

- Yes
- No

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period:**

Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.

BMP: Start a Grass Roots Movement Don't Over-Fertilize

Message Description and Distribution Method:

The Town of Holden's DPW (@HoldenDPW) retweeted a CMRSWC (@MAStormH20) tweet sharing a lawn/landscaping care BMPs message.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

The original tweet was liked 3 times, retweeted once, and quote tweeted once. @MAStormH2O has over 300 followers and averages more than 3,000 reaches per month. @HoldenDPW has more than 500 followers, increasing the audience reach of the tweet.

Message Date(s):

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

BMP:Residents: Do Your “Doody” for Clean Water Letter

Message Description and Distribution Method:

The DPW was notified that a resident had been seen disposing of pet waste into the Town's drainage system. A letter was drafted and mailed to residents to raise awareness of the issue. Language was kept consistent with similar letters sent out to Town residents in the past. Think Blue Massachusetts Pet Waste Disposal flyers were included with each letter.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

The letters were sent to and received by 309 residents.

Message Date(s): April 21, 2021

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

This was an additional educational message over the minimum requirements.

BMP: Think Blue Massachusetts

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>)
Advertisement on Facebook & YouTube. Video available on the Think Blue Massachusetts website.

Targeted Audience: Businesses, institutions and commercial facilities; Residents; Developers; Industrial

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

Over 30,911 social media impressions to Holden residents, including approximately 3,345 impressions for the Spanish language video.

Message Date(s): May 17, 2021 - June 4, 2021

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

This was an additional educational message over the minimum requirements.

BMP: Central Massachusetts Regional Stormwater Coalition - social media messaging

Message Description and Distribution Method:

Our community is a member of the Central Massachusetts Regional Stormwater Coalition (CMRSWC). In November 2020, CMRSWC contracted Capital Strategic Solutions (CSS) to assist with messaging requirements for MCM 1. A CMRSWC Facebook page and Instagram account were created, to supplement CMRSWC's existing Twitter account. Weekly messages were distributed through social media to target audiences consisting of residents, developers, businesses, institutions, commercial and industrial facilities located in CMRSWC communities. Topics on ways to reduce water pollution included: proper disposal of hazardous wastes, how to prepare for winter conditions, proper car washing techniques, septic system maintenance, yard maintenance, pet waste disposal, etc.

Targeted Audience: Businesses, institutions and commercial facilities; Residents; Developers; Industrial

Responsible Department/Parties: CMRSWC

Measurable Goal(s):

By June 2021, 220 posts had been added to the CMRSWC Facebook and Instagram pages with over 2,500 impressions on Facebook and over 2,200 impression on Instagram with over 1,000 engagements. CMRSWC's twitter account had over 3,000 posts with 492,400 impressions. CMRSWC's tweets had over 2,000 engagements. CMRSWC's social media posts were shared by numerous municipalities, organizations, and the EPA.

Message Date(s): Nov 2020 - June 2021

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

Social media messaging is a new service being provided to CMRSWC member communities in Year 3 and, therefore, would not have previously been identified on municipality's NOIs.

BMP: Social Media Post/Flyer: Rain Gardens Reduce Runoff

Message Description and Distribution Method:

The Central Massachusetts Regional Stormwater Coalition tweeted (@MAStormH2O) a green infrastructure/LID message on rain gardens.

Targeted Audience: Developers (construction), Residents

Responsible Department/Parties: CMRSWC

Measurable Goal(s):

The original tweet was liked 7 times and retweeted three times. @MAStormH2O has over 300 followers and averages more than 3,000 reaches per month. The tweet was retweeted by Massachusetts DEP (@MassDEP) which has over 10,500 followers.

Message Date(s): December 4, 2020

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period:**

The SWMP plan has been publicly available on the Town website with a comment section for residents to ask questions and send comments. On October 5, 2020 a presentation was made to the Board of Selectmen (BOS) to update the Town on revisions and additions to the SWMP.

The Town's General By-Laws, including the Stormwater Management Bylaw, were amended at the May 17, 2021 in person Annual Town Meeting. Then on June 21, 2021 the Town's Stormwater Rules and Regulations were adopted at a public hearing in person and the Stormwater Committee was formed. The Stormwater Committee reviews Land Disturbance permit applications submitted to the Town. All Stormwater Committee meetings are open to the public.

Was this opportunity different than what was proposed in your NOI? Yes No

Describe any other public involvement or participation opportunities conducted **during this reporting period:**

As a result of the COVID-19 pandemic, the Town of Holden has participated in virtual CMRSWC meetings including, but not limited to, the following dates:

Steering Meetings: September 2, 2020; October 22, 2020; November 17, 2020; February 25, 2021; April 8, 2021; May 19, 2021; June 15, 2021.

FY2021 Annual Meeting: November 17, 2020

The Town also took part in Worcester Polytechnical Institute's (WPI) Water Resources Outreach Center (WROC). The Town was interviewed by WPI students on April 7, 2021 about the process and challenges of complying with the MS4 permit. Several other municipalities were interviewed during the spring and the results of the interviews were presented by WPI on May 11, 2021.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

This SSO section is NOT applicable because we DO NOT have sanitary sewer

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period.***

Number of SSOs identified:

Number of SSOs removed:

MS4 System Mapping

Optional: Provide additional status information regarding your map:

Prior to the 2019 Annual Report, all outfalls, catch basins, manholes, and BMPs were surveyed and mapped, to the best of the Town's knowledge, using ArcGIS. These are all publicly available online via the Town's website. During the reporting period of 2020/2021, the piping infrastructure continued to be updated during all infrastructure repairs and construction as well as during any IDDE activities. The Town has continued to work with DCR to refine the Town's outfall and stormwater system mapping and watershed delineations.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

- No outfalls were inspected
- The outfall screening data is attached to the email submission
- The outfall screening data can be found at the following website:

<https://www.holdenma.gov/department-of-public-works/pages/stormwater-information>

*Below, report on the number of outfalls/interconnections screened **during this reporting period**.*

Number of outfalls screened:

*Below, report on the percent of outfalls/interconnections screened **to date**.*

Percent of outfalls screened:

Optional: Provide additional information regarding your outfall/interconnection screening:

In 2011 and 2013, Environmental Partners Group, Inc. screened all of the outfalls the in the Town (approx. 143). In 2021, all new outfalls were screened by Fuss & O'Neill. We plan to screen the outfalls previously screened in 2011 & 2013 in permit year 4 to confirm the conditions initially recorded.

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- No catchment investigations were conducted
- The catchment investigation data is attached to the email submission
- The catchment investigation data can be found at the following website:

*Below, report on the number of catchment investigations completed **during this reporting period**.*

Number of catchment investigations completed this reporting period:

*Below, report on the percent of catchments investigated **to date**.*

Percent of total catchments investigated:

Optional: Provide any additional information for clarity regarding the catchment investigations below:

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- No illicit discharges were found
- The illicit discharge removal report is attached to the email submission
- The illicit discharge removal report can be found at the following website:

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period.***

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed **since the effective date of the permit (July 1, 2018).***

Total number of illicit discharges identified:

Total number of illicit discharges removed:

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

Employee Training

Describe the frequency and type of employee training conducted **during this reporting period:**

Employees involved in the IDDE program participated in annual IDDE training provided virtually by Central Massachusetts Regional Stormwater Coalition on May 26, 2021. A summary and recording of the training is available on the CMRSWC website.

The Town also conducted annual IDDE training on June 25, 2021. A sign in sheet for the training can be found in Appendix E of the IDDE Plan.

MCM4: Construction Site Stormwater Runoff Control

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period.***

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

There were four wetland violations issued by the Conservation Commission during permit year 3, but none were construction enforcement actions.

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

As-built Drawings

Below, report on the number of as-built drawings received during this reporting period.

Number of as-built drawings received:

Optional: Enter any additional information relevant to the submission of as-built drawings:

As-built drawings were received for two new developments: Oak Hill (Jordan Road) and Parsons Rest (Shays Lane).

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

The Town's Subdivision Rules and Regulations are being revised to update street design standards. Adoption of new design regulations is expected in permit year 4. The Pioneer Valley Planning Commission's Code Review Checklist will be used to assess the statutes of these practices.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

The Town's Subdivision Rules and Regulations are being revised to meet the green infrastructure and low impact development standards. Adoption of new design regulations is expected in permit year 4. The Pioneer Valley Planning Commission's Code Review Checklist and Green Infrastructure Plan will be used to assess the statutes of these practices.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

The Town is taking inventory of opportunities to modify and retrofit stormwater designs to improve drainage. The intersection of Birchwood Dr and Brattle St was reconstructed in 2018 to reduce the impervious area. The Recreation Department parking lot was regraded in 2016 to drain to a swale and provide additional stormwater treatment.

MCM6: Good Housekeeping

Catch Basin Cleaning

*Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins **during this reporting period**.*

Number of catch basins inspected:

Number of catch basins cleaned:

Total volume or mass of material removed from all catch basins:

Below, report on the total number of catch basins in the MS4 system.

Total number of catch basins:

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

Street Sweeping

*Report on street sweeping completed **during this reporting period** using one of the three metrics below.*

Number of miles cleaned:

Volume of material removed:

Weight of material removed:

Stormwater Pollution Prevention Plan (SWPPP)

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed:

Describe any corrective actions taken at a facility with a SWPPP:

Facility inspections were conducted by DCR on the Town's behalf. Details can be found in the SWMP.

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- Not applicable
- The results from additional reports or studies are attached to the email submission
- The results from additional reports or studies can be found at the following website(s):

<https://www.holdenma.gov/department-of-public-works/pages/stormwater-information>

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

DCR staff conducts monthly monitoring that captures both wet and dry weather conditions at 5 stream locations in Holden. The parameters tested are: Alkalinity, pH, Temperature, Dissolved Oxygen, Total Nitrogen, Total Phosphorus, Total Organic Carbon, E. coli, Turbidity, Specific Conductance, Chloride, Mean Daily Discharge, Total Monthly Discharge. The five streams tested and their testing locations are:
 Asnebumskit Brook (Princeton) - M102 sampled upstream of Princeton St, near post office
 Cook Brook - Wyoming - MD11 sampled at Wyoming Dr
 Quinapoxet River (Canada Mills) - MD69 sampled upstream of River St bridge (Canada Mills)
 Trout Brook - M110 sampled downstream of Manning St
 Holden Forestry - FHLN sampled off Mason Rd, inside gate H-21

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

Holden is one of two Massachusetts municipalities participating in the SNEP Network, RIDEM, MassDEP, and EPA - Inter State MS4 Stormwater Crediting Technical Assistance program. Meetings started in April 2021 and are on-going.

COVID-19 Impacts

Optional: If any of the above year 3 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 4 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

- Develop a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover
- Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist
- Identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M

programs

- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)

Provide any additional details on activities planned for permit year 4 below:

Part V: Certification of Small MS4 Annual Report 2021

40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Title:

Signature: Date:

[Signatory may be a duly authorized representative]